



**UNITED STATES COAST GUARD**

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INVESTIGATION INTO THE CIRCUMSTANCES  
SURROUNDING THE EXPLOSION, FIRE, AND SINKING OF  
THE UNINSPECTED FISH PROCESSING VESSEL

# GALAXY

OFFICIAL NUMBER 576981, IN THE BERING SEA ON  
OCTOBER 20, 2002, WITH TWO PERSONS DECEASED AND  
ONE PERSON MISSING AND PRESUMED DEAD





16732  
June 2, 2005

**INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE EXPLOSION,  
FIRE, AND SINKING OF THE UNINSPECTED FISH PROCESSING VESSEL GALAXY,  
OFFICIAL NUMBER 576981, IN THE BERING SEA ON OCTOBER 20, 2002, WITH TWO  
PERSONS DECEASED AND ONE PERSON MISSING AND PRESUMED DEAD**

**ACTION BY THE COMMANDANT**

The record and the report of the Formal Investigation convened to investigate the subject casualty have been reviewed. The record and the report, including the findings of fact, analysis, conclusions, and recommendations are approved subject to the following comments.

**COMMENTS ON THE DISTRICT COMMANDER'S ENDORSEMENT**

Qualification of the Emergency Drill Conductor – page 116: According to testimony, Mr. Jerry Stephens was in charge of conducting safety training, instruction, and drills. A review of training records at the NPFVOA, Fremont Maritime Academy, and Alaska Marine Safety Education Association (AMSEA) indicate that Mr. Stephens was not certificated to conduct this training. Until September 15, 1998, Mr. Stephen's license would have allowed him to serve as the drill conductor. However, following this date, all drill conductors needed to attend a U.S. Coast Guard approved course to become a certified drill conductor or be individually approved by the local U.S. Coast Guard Marine Safety Office. While this lack of certification or U.S. Coast Guard approval does not necessarily mean that Mr. Stephens was not competent to conduct and supervise the emergency drills and instruction on board the FPV GALAXY, he was not certificated or approved to do so.

Comment: The District Commander correctly states that 46 CFR 28.270(c) does not specifically require a mariner to attend a Coast Guard approved course or to obtain approval through the local Coast Guard Marine Safety Office to be considered qualified as a fishing vessel drill conductor. The Coast Guard has provided supplemental guidance in Navigation and Vessel Inspection Circular (NVIC) 7-93, *Guidelines for Acceptance of "Fishing Vessel Safety Instructors" and Course Curricula for Training "Fishing Vessel Drill Conductors."* NVIC 7-93 indicates that "to be assured of meeting Coast Guard minimum training requirements of 46 CFR 28.270(c), Fishing Vessel Drill Conductors, who are not licensed for operation of inspected vessels of 100 gross tons or more, must be trained by a Fishing Vessel Safety Instructor" that has been accepted by the local Officer in Charge, Marine Inspection (OCMI).

Recommendation 2: The Officer in Charge Marine Inspection, Western Alaska should initiate an investigation into a possible violation of 46 CFR 28.270(c).

Comment: The District Commander does not concur with this recommendation, stating that this recommendation is based on the regulatory interpretation that all drill conductors need to attend a U.S. Coast Guard approved course to become a certified drill conductor or be individually approved by the local U.S. Coast Guard Marine Safety Office. The District Commander recommends that further guidance and interpretation of 46 CFR 28.270(c) be provided to better define "proper training." We concur with the intent of the District Commander's recommendation. Although Navigation and Vessel Inspection Circular (NVIC) 7-93, *Guidelines for Acceptance of "Fishing Vessel Safety Instructors" and Course Curricula for Training "Fishing Vessel Drill Conductors,"* provides guidance on the training that an individual must have in order to meet the requirements of 46 CFR 28.270(c), we will further consider this issue during our upcoming regulatory project and policy review on fishing vessel safety.

### **ACTION ON RECOMMENDATIONS**

Recommendation 8: The Seventeenth Coast Guard District, along with Coast Guard Headquarters, and representatives from ABS and DNV, should initiate and develop policy guidance to address and clarify existing requirements for manning and watch keeping on board head and gut fishing vessels and fish processing vessels less than 1600 GT. This policy should include, but not be limited to, clearly defining the terms "manned engine space" and "periodically unattended machinery space." Any new policy guidance should complement the statutory and regulatory language defining the term "Watch" as found in 46 USC Chapter 81 and 46 CFR Part 15.

Action: We concur with the intent of this recommendation. While some of these terms and policies are already defined, we agree that there is a need for further action to clarify them and make their application more consistent nationwide. We will move forward with discussions with the Coast Guard's Fishing Vessel Safety Coordinators to develop a plan to improve the consistent application of terms and policies associated with manning and watch keeping on head and gut fishing vessels and fish processing vessels less than 1600 gross tons.

Recommendation 13: In developing future fishery rationalization alternatives for the BSAI/GOA groundfish FMPs involving head and gut vessels, the North Pacific Fishery Management Council should consider utilizing the authority provided in National Standard 10 and recommend that all head and gut vessels which remain in these fisheries following rationalization meet additional safety standards as recommended by the U.S. Coast Guard.

Action: We concur with the intent of this recommendation. As further recommended by the District Commander, we will review the proposal and consult with the Commercial Fishing Industry Vessel Safety Advisory Committee (CFIVSAC) to determine a course of action.

Recommendation 14: In the absence of new regulations, all fish processing vessels and head and gut vessels should voluntarily adopt Recommendations 19-26.

Action: We concur with the intent of this recommendation. A review and revision of Navigation and Vessel Inspection Circular (NVIC) 5-86, *Voluntary Standards for U.S. Uninspected Commercial Fishing Vessels*, will be conducted. As part of that review, we will consider whether those recommendations that do not result in new regulations should be included in the revised NVIC.

Recommendation 15: Safety training organizations approved by the U.S. Coast Guard should develop safety videos and training programs for non-English speaking commercial fishing employees to ensure that all non-English speaking crew members are familiar with their emergency responsibilities and duties.

Action: We concur with this recommendation. We have already had AMSEA prepare training videos in Spanish and Vietnamese. In addition, we will encourage other training organizations to develop versions of their training videos and programs in languages other than English.

Recommendation 16: Commercial fishing vessel owners and operators should provide drill instructor training for lead non-English speaking factory and fish processing personnel to ensure that all non-English speaking crew members are familiar with their emergency responsibilities and duties.

Action: We concur with the intent of this recommendation. We agree that adequate safety training must be provided for all fishing vessel employees, including those not conversant in English. However, since operators must also insure that emergency instructions are understood by all crewmembers, additional measures may be necessary. We will include the issue of crew members' English proficiency and its effect on training and emergency response in our upcoming regulatory project and policy review on fishing vessel safety.

Recommendation 17: Commercial fishing vessel owners and fishing vessel organizations should recommend to the North Pacific Fishery Management Council and National Marine Fisheries Service that head and gut vessels remaining in any future rationalized fisheries meet additional safety standards as recommended by the U.S. Coast Guard.

Action: We concur with the intent of this recommendation. As further recommended by the District Commander, we will review the proposal and consult with the Commercial Fishing Industry Vessel Safety Advisory Committee (CFIVSAC) to determine a course of action.

Recommendation 18: For vessels where it is the policy to notify the master of the vessel prior to discharging the vessel's CO2 system, vessel owners should install an independently powered emergency communication system between the wheelhouse and the CO2 room, to allow immediate emergency notification communication to the wheelhouse.

Action: We concur with the intent of this recommendation. We agree that rapid communication during an emergency is necessary; however, this proposal exceeds the current standards for

inspected vessels. We agree that owners should provide a reliable means of communication between the CO2 room and the wheelhouse.

Recommendation 19: The U.S. Coast Guard should develop regulations, under the provisions of 46 USC 4502(b)(2)(G), for all fishing vessels where an individual liferaft weighs 200 pounds or more, to install liferaft launching arrangements where that raft can be launched by a single person.

Action: We concur with the intent of this recommendation. Stowage and launching arrangements for large liferafts on fishing vessels should allow easy launching. Generally, large liferafts should be stowed so as not to require significant lifting unless mechanical devices are installed to assist in their launch. We will evaluate the feasibility of implementing such requirements for uninspected fishing vessels during our upcoming regulatory project and policy review on fishing vessel safety.

Recommendation 20: The U.S. Coast Guard should develop regulations, under the provisions of 46 USC 4502(b)(2)(G), to require engine room fire detection and monitoring equipment on all new and existing fish processing vessels and head and gut vessels. These detection systems should have monitors or alarms installed in both the wheelhouse and engine room monitoring stations and should be tested monthly.

Action: We partially concur with this recommendation. We agree that fire detection systems should be required for periodically unattended machinery spaces on certain fish processing vessels and head and gut vessels. However, we do not agree that such a requirement should be applied to all existing vessels. We intend to propose regulations to implement this recommendation for new and existing vessels that must comply with 46 CFR 28, Subpart D.

Recommendation 21: The U.S. Coast Guard should develop regulations, under the provisions of 46 USC 4502(b)(2)(G), to require that vessels be equipped with embarkation ladders for each survival craft on board. This is recommended for high-sided head and gut vessels and fish processing vessels where the survival craft or embarking station is located at heights greater than 15 feet above the waterline.

Action: We concur with the intent of this recommendation. We agree that vessels that have high freeboard where the survival craft or embarkation stations are located at heights greater than 15 feet above the waterline need to have arrangements to ensure the safe boarding of survival craft. We note that other regulations require an embarkation ladder where the embarkation station is 10 feet above the waterline. We will further consider this issue during our upcoming regulatory project and policy review on fishing vessel safety.

Recommendation 22: The U.S. Coast Guard should develop regulations, under the provisions of 46 USC 4502(b)(2)(G), to require that all personal marker lights for survival suits be of the strobe variety and be designed so that the user may activate the light with one hand. This recommendation is for all commercial fishing vessels operating in cold waters.

Action: We do not concur with this recommendation. There is no international consensus that strobe lights are more effective than steady lights in all conditions. Both types have long been equally accepted internationally for use on all types of vessels. Strobe lights can cause disorientation and vertigo in the dark, and therefore are required to have manual switches. Steady lights are not required to have manual switches. While the switches must be operable by immersion-suit-gloved hands, there is no requirement that any lights be capable of activation with one hand. We will publish the results of this investigation for light manufacturers to consider in the development and improvement of their products.

Recommendation 23: The U.S. Coast Guard should develop regulations, under the provisions of 46 USC 4502(b)(2)(G), to require that man overboard recovery devices (in addition to liferings) be required on all documented commercial fishing vessels operating beyond the boundary line.

Action: We do not concur with this recommendation. The Coast Guard does not require dedicated man overboard recovery devices other than rescue boats on any commercial vessels. Presently available man overboard recovery devices depend on maneuvering the vessel alongside the person in the water to allow the use of a fixed davit, net, ladder, or other equipment, and likely would have been ineffective under the circumstances of this casualty.

Recommendation 24: The U.S. Coast Guard should develop regulations to require that more than one person on board a commercial fishing vessel be trained as a drill instructor in accordance with 46 CFR 28.270 for crews greater than sixteen people.

Action: We concur with this recommendation. We agree that there needs to be more than one drill conductor when the number of persons on board a fishing vessel exceeds sixteen. We intend to propose regulations that will require one drill conductor for every sixteen, or fraction thereof, persons on board.

Recommendation 25: The U.S. Coast Guard should develop additional safety training practices, guidelines, and recommendations for fire team members on commercial fishing vessels equipped with SCBAs and firemen outfits and for commercial fishing vessels which utilize rescue swimmers.

Action: We concur with this recommendation. A review and revision of Navigation and Vessel Inspection Circular (NVIC) 5-86, *Voluntary Standards for U.S. Uninspected Commercial Fishing Vessels*, will be conducted. As part of that review, we will consider additional safety training practices, guidelines, and recommendations for fire team members on commercial fishing vessels equipped with SCBAs and firemen outfits and for commercial fishing vessels which utilize rescue swimmers.

Recommendation 26: The U.S. Coast Guard should develop regulations requiring vessel owners and naval architects to report significant alterations and major conversions on commercial fishing industry vessels to the U.S. Coast Guard.

Action: We concur with the intent of this recommendation. Existing requirements for notifying the Coast Guard of repairs, alterations or conversions of inspected vessels enable the Coast

Guard to determine the appropriate regulations to apply to the vessel and to ensure that the vessel can be safely operated in the service in which it is employed. In most cases, inspections must be conducted. Since commercial fishing industry vessels are uninspected, it is questionable whether a requirement to report significant alterations and major conversions to the Coast Guard would result in an increase in safety, as we lack the authority to require the vessels to submit to an inspection by the Coast Guard to determine what regulations might apply or whether the vessel can be safely operated following the changes. However, current regulations for commercial fishing industry vessels do address alterations and conversions and how they may affect the applicability of certain regulations. We will further consider this issue during our upcoming regulatory project and policy review on fishing vessel safety.

Recommendation 27: The U.S. Coast Guard, through the International Maritime Organization, should develop regulations to require that liferaft paddles in SOLAS A and SOLAS B rafts be designed of a material suitable for use in life threatening and emergency situations.

Action: We concur with this recommendation. At present, the only specific International Maritime Organization (IMO) requirement for paddles provided in a liferaft is a demonstration that they can be used to maneuver the liferaft a short distance in calm water. We will pursue improvements at the next opportunity to review the IMO requirements for liferafts. In addition, the International Organization for Standardization (ISO) is currently developing an international standard for survival equipment carried in lifeboats, liferafts, and rescue boats. We will propose that the requirements for paddles in this standard take into account use in a seaway and in adverse climatic conditions. In the meantime, we will also share the results of this investigation with suppliers of liferafts and paddles so that they are aware of the difficulties and failures exhibited in this casualty.

Recommendation 28: The U.S. Coast Guard should make technical corrections to 46 CFR 28.265, 46 CFR 28.270, and 46 CFR 28.275 to further clarify and simplify the existing requirements for safety instructions, training, and emergency drills.

Action: We concur with the intent of this recommendation. We will further consider this recommendation during our upcoming regulatory project and policy review on fishing vessel safety.

Recommendation 29: The U.S. Coast Guard should seek legislative authority to provide a new and separate definition of "head and gut fish processing vessel" in 46 USC 2101(11). This new definition should include fishing vessels currently engaged in head and gut processing operations with more than 16 people on board.

Action: We concur with the intent of this recommendation. We agree that changes in the statutory definitions of fishing vessels could be made to improve safety. We also agree with the comments of the District Commander that the focus should be on the number of persons on board instead of the specific type of operation being conducted. Therefore, we will initiate a legislative and/or regulatory proposal to define and classify vessels based on the number of persons on board.

Recommendation 30: The vessels affected by Recommendation 29 should have additional modest regulations developed to improve standards for evacuation of crew members, fire detection and monitoring equipment, training of crew members and watertight integrity.

Action: We concur with the intent of this recommendation. We believe that the current and planned initiatives described in our responses to the preceding recommendations satisfy the intent of this recommendation.

Recommendation 31: The investigating officer recommends that this casualty investigation be closed.

Action: We concur with this recommendation. This casualty investigation is closed.

A handwritten signature in black ink, appearing to read "W D Rabe", with a stylized flourish at the end.

**W. D. RABE**  
By direction





16732

**EXPLOSION, FIRE, AND SINKING OF THE CLASSED FISH PROCESSING VESSEL  
GALAXY IN THE BERING SEA WITH TWO PERSONS DECEASED AND ONE  
PERSON MISSING AND PRESUMED DEAD**

**ACTION BY THE DISTRICT COMMANDER**

The record and the report of the Formal Investigation convened to investigate the subject casualty have been reviewed. The record and the report, including the description of casualty, analysis, conclusions, and recommendations are approved subject to the following comments.

**COMMENTS ON BERING SEA SEARCH AND RESCUE (SAR) / COMMUNICATIONS  
COVER**

Pg 38: In addition to the additional SAR assets available on the fishing grounds, U.S. Coast Guard LORAN Station St. Paul had been conducting a 24 hr VHF radio watch during the red king crab season. This radio watch is not mandated by Seventeenth District policy but was implemented by the current Commanding Officer at LORSTA St. Paul.

Comment: The LORSTA's initiative to stand a 24 hr VHF watch greatly improved the Coast Guard's ability to communicate with the vessel and respond quickly. No other Coast Guard assets were in communications range of the FPV GALAXY at the time of the casualty and if LORSTA had not been maintaining a VHF watch, then our response might have been detrimentally slower. The Bering Sea, as well as other areas throughout Alaska, continually face communication problems due to the large expanse of isolated area of operation and harsh weather conditions. This is just one more example of our need to continually strive to improve communications throughout the Alaska AOR. There are still other areas in Alaskan waters in which we currently do not have the means to quickly communicate with vessels.

**COMMENTS ON CASUALTY ANALYSIS**

Pg 116: Qualification of the Emergency Drill Conductor: According to testimony, Mr. Jerry Stephens was in charge of conducting safety training, instruction, and drills. A review of training records at the NPFVOA, Fremont Maritime Academy, and Alaska Marine Safety Education (AMSEA) indicate that Mr. Stephens was not certified to conduct training. Until September 15, 1998, Mr. Stephen's license would have allowed him to serve as drill conductor. However, following this date, all drill conductors needed to attend a U.S. Coast Guard approved course to become a certified drill conductor or be individually approved by the local U.S. Coast Guard Marine Safety Office. While this lack of certification of U.S. Coast Guard approval does not necessarily mean that Mr. Stephens was not competent to conduct and supervise the emergency drills and instruction on board the FPV GALAXY, he was not certified or approved to do so.

Comment: I do not concur that the current regulations require a mariner to specifically attend a U.S. Coast Guard approved course or obtain an approval through the local U.S. Coast Guard Marine Safety Office and be certified to conduct safety training. 46 CFR 28.270 requires

individuals to be properly trained, but does not specifically require the training to be conducted at a U.S. Coast Guard approved course, nor does it require a mariner to obtain an approval through the local U.S. Coast Guard Marine Safety Office. The preamble to this regulation (Federal Register Vol 56, No. 157, Wednesday, August 14, 1991) states there are various ways for a mariner to become properly trained and does not restrict the training to U.S. Coast Guard approved courses. No part of this regulation states that a mariner has to be certified to conduct training. 46 CFR 28.275 are the requirements for instructors teaching course(s) to prospective drill conductors, however I can understand why different entities may interpret these regulations differently. The regulations in 46 CFR 28.270 are not specific in defining the training required for a mariner to be a drill conductor.

#### COMMENTS ON CONCLUSIONS

Conclusion No. 52, Pg 130: There is sufficient evidence that Captain Dave Shoemaker did not have a properly qualified drill instructor conducting safety instruction and drills on board the FPV GALAXY, a possible violation of 46 CFR 28.270(c).

Comment: I do not concur, this conclusion is based on the premise that all drill conductors need to attend a U.S. Coast Guard approved course to become a certified drill conductor or be individually approved by the local U.S. Coast Guard Marine Safety Office. As stated in the above comment on casualty analysis, the regulations do not require drill conductors to attend a U.S. Coast Guard approved course or be individually approved by the local U.S. Coast Guard Marine Safety Office. This investigation has not provided substantiated evidence to show that the drill conductor was not properly trained.

#### ACTION ON RECOMMENDATIONS

Recommendation 1, 3-7: Recommendations to the Marine Safety Office Anchorage.

Action: I concur with these recommendations and with the actions of the Officer in Charge Marine Inspection, Western Alaska.

Recommendation 2: The Officer in Charge Marine Inspection, Western Alaska should initiate an investigation into a possible violation of 46 CFR 28.270(c).

Action: I do not concur with this recommendation. This recommendation is based on the regulatory interpretation that all drill conductors need to attend a U.S. Coast Guard approved course to become a certified drill conductor or be individually approved by the local U.S. Coast Guard Marine Safety Office. As stated in the above comment on casualty analysis, the regulations do not require drill conductors to attend a U.S. Coast Guard approved course or be individually approved by the local U.S. Coast Guard Marine Safety Office. This investigation has not provided substantiated evidence to show that the drill conductor was not properly trained. As I have stated in my comments on Casualty Analysis, I can understand the confusion of interpreting this regulation and recommend G-MOC provide further guidance and interpretation of this regulation which better defines "proper training".

Recommendation 8: The Seventeenth Coast Guard District, along with local representatives from ABS and DNV, should initiate and develop policy guidance to address and clarify existing requirements for manning and watch keeping on board head and gut and fishing vessels and fish processing vessels less than 1600 GT. This policy should include, but not be limited to, clearly defining the terms "manned engine space" and "periodically unattended machinery space". Any new policy guidance should complement the statutory and regulatory language defining the term "Watch" as found in 46 USC Chapter 81 and 46 CFR Part 15.

Action: I concur with the intent of this recommendation. Existing compliance problems need to be first addressed internally before going out to the industry. While we agree a problem does exist, the first step should be for a CG wide Fishing Vessel Coordinator conference to discuss this issue along with other issues and develop a consistent plan of attack on a national level.

Recommendation 9: The Seventeenth Coast Guard District should recognize the extraordinarily brave and heroic efforts of Captain David Shoemaker, Raul Vielma, Ryan Newhall and Calvin Paniptchuck.

Action: I concur with this recommendation. Award recommendation packages have been submitted to WPM-3: David Shoemaker (Gold Life Saving Medal), Raul Vielma (Gold Life Saving Medal), Ryan Newhall (Gold Life Saving Medal), and Calvin Paniptchuck (Silver Life Saving Medal).

Recommendation 10: The Seventeenth Coast Guard District should consider providing public service awards to the master and crews of the F/V BLUE PACIFIC, F/V GLACIER BAY, and the F/V CLIPPER EXPRESS.

Action: I concur with this recommendation. Award recommendation packages have been submitted and approved: Captain and Crew F/V GLACIER BAY (Meritorious Public Service Award), Captain and Crew F/V BLUE PACIFIC (Meritorious Public Service Award), and Captain and Crew F/V CLIPPER EXPRESS (Distinguished Public Service Award).

Recommendation 11: The Seventeenth Coast Guard District should develop multiple safety alerts for the lifesaving, fire detection, and fire team response issues which were documented in this investigation.

Action: I concur with this recommendation. MSO Anchorage will be advised to draft safety alerts, coordinating with the unit Fishing Vessel Examiner and forward to D17 Commercial Fishing Vessel Coordinator for approval and dissemination to the industry.

Recommendation 12: The Seventeenth Coast Guard District Office of Search and Rescue (OSR) should direct all rotary wing aircraft with a qualified SAR aircrew on board and all underway major cutters, patrol boats, and buoy tenders to carry automatic external defibrillators (AED).

Action: I concur with the intent of this recommendation. An AED is carried on all Air Station Sitka HH-60s whenever a rescue swimmer is part of the crew makeup (all ready crew flights); the AED is an integral part of this unit's MEDEVAC kit. AEDs are available for use on Air Station Kodiak aircraft, but are only carried at the discretion of the rescue swimmer or corpsman, depending on the mission requirements. Both Station Ketchikan and Station Juneau have one AED each: the AED is normally carried on their 47 foot MLBs when underway with personnel qualified to operate the equipment. The 25 (RBHS) or 27 (UTM) foot boats do not normally carry an AED when underway (primarily due to storage/space constraints). All three D17 WHECs have an AED on board. All D17 patrol boats have an AED on board except for Long Island & Anacapa; D17 (osr) is working with these units to acquire AEDs at no cost through MLCPAC (k). All D17 buoy tenders have an AED on board except for the Elderberry; D17 (osr) is working with this unit to acquire an AED at no cost through MLCPAC (k).

Recommendation 13: Recommendation to the North Pacific Fishery Management Council.

Action: I concur with the intent of the recommendation to the North Pacific Fishery Management Council and recommend G-MOC review and provide input to the Vessel Safety Advisory Committee.

Recommendations 14-18: Recommendations to the Commercial Fishing Industry

Action: I concur with the intent of the recommendations to the Commercial Fishing Industry and recommend G-MOC review and provide input to the Vessel Safety Advisory Committee.

Recommendations 19-28: Recommendations to U.S. Coast Guard Headquarters.

Action: I concur with the intent of the recommendations to U.S. Coast Guard Headquarters and recommend G-MOC review for further action.

Recommendations 29 & 30: Recommendations to U.S. Coast Guard Headquarters.

Action: I concur with the intent of the recommendations to U.S. Coast Guard Headquarters and recommend G-MOC review for further action. Any change of definition/classification of a fishing vessel should be based on the number of persons on board (POB)/lives at risk and not on the type of operation the vessel performs (i.e. removing tails, fins, heads, etc.). The definition/classification should take into account that as the number of POB increases so does the consequences of a casualty increase. A classification based on the number of POB is already in practice as seen with passenger vessels; having increased safety standards for those vessels carrying more passengers – "UPVs", "T-Boats", "K-boats", and "H-boats".

Recommendation 31: The investigating officer recommends that this casualty investigation be closed.

Action: I concur with this recommendation.



J. W. UNDERWOOD  
REAR ADMIRAL, U. S. COAST  
COMMANDER, SEVENTEENTH COAST GUARD DISTRICT



16732/FPV GALAXY  
5 March 2004

**INVESTIGATION INTO THE EXPLOSION, FIRE, AND SINKING OF THE  
CLASSIFIED FISH PROCESSING VESSEL GALAXY IN THE BERING SEA WITH  
TWO PERSONS DECEASED AND ONE PERSON MISSING AND PRESUMED DEAD**

**ACTION BY THE OFFICER IN CHARGE, MARINE INSPECTION WESTERN ALASKA**

I have reviewed the record and the report of the Formal Investigation convened to investigate the subject casualty. I agree and concur with the record and the report, including the description of the casualty, analysis, and conclusions found by the Investigating Officer. I have provided commentary for the recommendations for my command. The remaining recommendations within this report are forwarded for your approval.

**ACTION ON RECOMMENDATIONS**

**Recommendation 1:** The Officer in Charge Marine Inspection, Western Alaska should initiate an investigation into a possible violation of 46 CFR 28.270 (a).

Action: I do not concur with this recommendation. While the drills conducted on the FPV GALAXY prior to the accident were not sufficient to meet the horrific demands of the actual casualty, there is sufficient evidence that some drills were being conducted. However, due to the lack of well-defined standards by the U.S. Coast Guard at the time of the casualty as to what constitutes an adequate emergency drill, it is extremely difficult to demonstrate a lack of compliance with this regulation. As such, I will not pursue civil penalty actions or suspension and revocation hearings against the master of the FPV GALAXY because I believe that the master was conducting and documenting drills to the level expected at the time by the U.S. Coast Guard and I believe that even if the crew had conducted more thorough drills, the outcome would likely not have changed. However, because of the importance of the intent of this regulation, my office has initiated a comprehensive program, as described in Recommendation 5, to ensure compliance with safety training and emergency drill requirements within the head and gut fishing fleet.

**Recommendation 2:** The Officer in Charge Marine Inspection, Western Alaska should initiate an investigation into a possible violation of 46 CFR 28.270 (c).

Action: I concur with this recommendation. There was no evidence provided during the hearings or discovered upon further analysis that the Chief Mate was authorized to conduct emergency drills in accordance with 46 CFR 28.270 (c). I intend to initiate a separate investigation into the possible violation of this regulation.

Recommendation 3: The Officer in Charge Marine Inspection, Western Alaska should initiate an investigation into a possible violation of 46 CFR 15.810 (c).

Action: I concur with this recommendation. The license of the Chief Mate expired five days prior to the explosion on the FPV GALAXY. During the analysis of this casualty, it was determined that a license renewal package was never submitted to the U.S. Coast Guard. While the expiration of the license had nothing to do with the explosion or the ensuing casualty, the vessel owner should not have employed a Chief Mate whose license was going to expire during the intended voyage. I intend to initiate a separate investigation into the possible violation of this regulation.

Recommendation 4: The Officer in Charge Marine Inspection, Western Alaska should initiate an investigation into a possible violation of 46 CFR 15.825 (a).

Action: I do not concur with this recommendation. While there is evidence that a violation of this regulation may have occurred, it remains unclear to me whether a licensed assistant engineer is required on fishing and fish processing vessels less than 1600 gross tons. Additionally, there is widespread evidence that most head and gut vessels operating in the Bering Sea / Aleutian Island (BSAI) and Gulf of Alaska (GOA) groundfish fisheries are not currently operating with a licensed assistant engineer and that numerous Coast Guard units have been issuing commercial fishing vessel safety decals to these vessels without requiring a licensed assistant engineer. I strongly recommend that the Seventeenth Coast Guard District and Coast Guard Headquarters concur with Recommendation 8 of this report to develop policy guidance to address this matter.

Recommendation 5: Marine Safety Office Anchorage, along with the North Pacific Fishing Vessel Owners Association, should develop a Task Force to address existing compliance problems in the safety training, instruction and drills for the head and gut and fleets of Alaska and Washington.

Action: I concur with this recommendation. In January 2004 Marine Safety Office Anchorage has initiated a comprehensive training and drill enforcement program targeting the head and gut processing fleet operating in the BSAI / GOA groundfish fisheries. The concept of operations for this program is provided as enclosure (2). To date, fully one third of the fleet has been required to demonstrate full compliance with the provisions of 46 CFR 28.270. A full report of this operation will be completed and submitted to the Seventeenth Coast Guard District no later than July 15, 2004.

Recommendation 6: Copies of this report should be provided to owner of the FPV GALAXY, Captain Dave Shoemaker, Mr. Raul Vielma, the families of the deceased, the Commercial Fishing Industry Safety Advisory Committee, and the Executive Director of the North Pacific Fishery Management Council.

Action: I concur with this recommendation and will ensure that copies are provided to all named parties.

Recommendation 7: This report should be given wide dissemination throughout the North Pacific commercial fishing industry including the National Marine Fisheries Service observer program, various fishery news organizations, the North Pacific Fishing Vessel Owner's Association, the Alaska Marine Safety Education Association, the Groundfish Forum, and the North Pacific Longline Association.

Action: I concur with this recommendation. Immediately following the release of this report, the Investigating Officer will hold numerous presentations for commercial fishermen, safety experts, and other interested parties in Seattle, WA, Anchorage, AK and other communities to discuss the findings of this investigation.



R. J. MORRIS  
Captain, U. S. Coast Guard  
Officer In Charge, Marine Inspection  
Western Alaska

- Encl: (1) Report for the Formal Investigation into the Explosion, Fire, and Sinking of the Classed Fish Processing Vessel GALAXY in the Bering Sea with Two Persons Deceased and One Person Missing and Presumed Dead
- (2) Comprehensive Verification Strategy for Emergency Drills on the Bering Sea / Aleutian Island and Gulf of Alaska Head and Gut Processing Fleet

## ***Marine Safety Office Anchorage Emergency Drills Evaluation Form***

Vessel Name: \_\_\_\_\_

ON: \_\_\_\_\_

Gross Tonnage: \_\_\_\_\_

Length: \_\_\_\_\_

Loadline Issued By? (If applicable): \_\_\_\_\_

Classed By? \_\_\_\_\_

Total Crew Size: \_\_\_\_\_

# Processors: \_\_\_\_\_

### **Summary of Licensed Crew**

Captain

Yes No

Chief mate

Yes No

Chief Engineer

Yes No

Assistant Engineer

Yes No

### **Emergency Drill Practices and Documentation**

Person with Drill Conductor Card in Crew?

Yes No

Card Issued by: \_\_\_\_\_

Date of Issue: \_\_\_\_\_

Does vessel safety orientation?

Yes No

Does vessel log safety training?

Yes No

Does vessel log emergency drills?

Yes No

Is Observer involved in drills?

Yes No

How often does vessel conduct drills? \_\_\_\_\_

### **Safety Reminder**

Has a securite broadcast been issued?

Yes No

Has the master and crew members been notified of safety procedures to be followed during drills? (No charged hoses, no persons in water, no running)

Yes No

Drills performed satisfactorily: Yes \_\_\_\_ No \_\_\_\_

Enclosure (2)



# ***Marine Safety Office Anchorage Emergency Drills Evaluation Form***

## **Pre-Fire Drill Evaluation (Non-Engine Room Fire)**

Does the vessel have a fire main?	Yes	No	
Are hose stations properly equipped?	Yes	No	
Does the vessel have a portable fire pump?	Yes	No	
Does the vessel have firemen outfits?	Yes	No	How many? _____
Does the vessel have an SCBA's and spare bottles?	Yes	No	How many? _____

## **Fire Drill (Non-Engine Room Fire)**

Location & source of fire? \_\_\_\_\_

Was smoke detected by crew member?	Yes	No	N/A
Did crew member take initial action with a portable fire extinguisher?	Yes	No	N/A
Did crew member secure space?	Yes	No	N/A
Did crew member notify others?	Yes	No	N/A
Did master sound fire alarm and notify crew?	Yes	No	N/A
Does the master initiate a MAYDAY or other appropriate notification?	Yes	No	N/A
Did fire team respond to location in a timely manner?	Yes	No	N/A
Did fire team don appropriate safety equipment?	Yes	No	N/A
Did fire team effectively use tether line?	Yes	No	N/A
Did fire team effectively use hose and nozzles?	Yes	No	N/A
Did fire team effectively use portable extinguishers?	Yes	No	N/A
Did fire team use portable pump?	Yes	No	N/A
Was suction hose long enough?	Yes	No	N/A
Did fire team set fire boundaries?	Yes	No	N/A
Did fire team secure electricity?	Yes	No	N/A
Did fire team secure ventilation?	Yes	No	N/A
Did fire team effectively set fire watch?	Yes	No	N/A
Did fire team effectively communicate with bridge?	Yes	No	N/A
What method of comms was used?	Radio	Messenger	
Did non-emergency team members quickly evacuate to appropriate muster station?	Yes	No	N/A
Did evacuating personnel bring survival suits?	Yes	No	N/A
Were muster sheets available and used immediately?	Yes	No	N/A

Drills performed satisfactorily: Yes \_\_\_\_ No \_\_\_\_

Enclosure (2)

# ***Marine Safety Office Anchorage Emergency Drills Evaluation Form***

## **Pre-Fire Drill Evaluation (Engine Room Fire)**

What is vessel's main space fire doctrine?

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Does vessel have a USCG approved fixed fire fighting system in E/R?	Yes	No	
Does the vessel have a fire main?	Yes	No	
Are hose stations properly equipped?	Yes	No	
Does engine room have fire dampers?	Yes	No	
Does the vessel have firemen outfits?	Yes	No	How many? _____
Does the vessel have SCBA's and spare bottles?	Yes	No	How many? _____

## **Fire Drill (Engine Room Fire)**

Was smoke detected by crew member?	Yes	No	N/A
Did crew member take initial action with a portable fire extinguisher?	Yes	No	N/A
Did crew member secure space?	Yes	No	N/A
Did crew member notify others?	Yes	No	N/A
Did master sound fire alarm and notify crew?	Yes	No	N/A
Does the master initiate a MAYDAY or other appropriate notification?	Yes	No	N/A
Did fire team respond to location in a timely manner?	Yes	No	N/A
Did fire team don appropriate safety equipment?	Yes	No	N/A
Did fire team secure electricity?	Yes	No	N/A
Did fire team secure engine room ventilation?	Yes	No	N/A
Did fire team install fire dampers?	Yes	No	N/A
Did fire team shut off fuel to space?	Yes	No	N/A
Did engineer notify bridge of intention to use fixed CO2?	Yes	No	N/A
Does fire team recognize sound of CO2 alarm?	Yes	No	N/A
Did fire team set fire boundaries?	Yes	No	N/A
Did fire team effectively set fire watch?	Yes	No	N/A
Did fire team effectively communicate with bridge?	Yes	No	N/A
What method of comms was used?	Radio	Messenger	
Did non-emergency team members quickly evacuate to appropriate muster station?	Yes	No	N/A
Did evacuating personnel bring survival suits?	Yes	No	N/A
Were muster sheets available and used immediately?	Yes	No	N/A

Drills performed satisfactorily: Yes \_\_\_\_\_ No \_\_\_\_\_

Enclosure (2)

# ***Marine Safety Office Anchorage Emergency Drills Evaluation Form***

## **Pre-Flooding Drill Evaluation**

Does vessel have a portable damage control kit?	Yes	No
Is damage control kit sufficient for the size of the vessel?	Yes	No
Does the vessel have a portable bilge pump?	Yes	No
Is suction hose equipped with an adequate strainer?	Yes	No

## **Flooding Drill**

Location & source of flooding?	<hr/>		
Was flooding detected by crew member?	Yes	No	N/A
Did crew member notify others?	Yes	No	N/A
Did crew member secure space?	Yes	No	N/A
Were all watertight doors secured?	Yes	No	N/A
Did master sound alarm and notify crew?	Yes	No	N/A
Does the master initiate a MAYDAY or other appropriate notification?	Yes	No	N/A
Did damage control team respond to location in a timely manner?	Yes	No	N/A
Did damage control team bring DC kit?	Yes	No	N/A
Did damage control team bring portable pump?	Yes	No	N/A
Was suction hose long enough to reach flooded area?	Yes	No	N/A
Was discharge hose long enough to safely dewater enough space?	Yes	No	N/A
Did damage control team effectively communicate with bridge?	Yes	No	N/A
What method of comms was used?	Radio	Messenger	
Did non-emergency team members quickly evacuate to appropriate muster station?	Yes	No	N/A
Did evacuating personnel bring survival suits?	Yes	No	N/A
Were muster sheets available and used immediately?	Yes	No	N/A

Drills performed satisfactorily: Yes \_\_\_\_ No \_\_\_\_

Enclosure (2)

# ***Marine Safety Office Anchorage Emergency Drills Evaluation Form***

## **Pre-Abandon Ship Drill Evaluation**

Are survival suits stowed in proximate locations to the embarkation point?	Yes	No
Are the liferafts stowed in proximate locations to the embarkation point?	Yes	No
Are there sufficient cut aways to launch the rafts through the rails??	Yes	No
Can the life rafts be launched by one person?	Yes	No
Is there an embarkation ladder?	Yes	No

## **Abandon Ship Drill**

Does the master initiate the abandon ship signal?	Yes	No	N/A
Does the master initiate a MAYDAY or other appropriate notification?	Yes	No	N/A
Do all crew members arrive at the abandon ship muster station quickly?	Yes	No	N/A
Do crew members bring the flares?	Yes	No	N/A
Do crew members bring the SARTS?	Yes	No	N/A
Do crew members bring the EPIRB?	Yes	No	N/A
Do crew members bring extra water or food?	Yes	No	N/A
Do all crew members immediately put on their survival suits?	Yes	No	N/A
Do crew members remove hats and draw string sweatshirts?	Yes	No	N/A
Do crew members utilize plastic bags to don their suits?	Yes	No	N/A
Do crew members don their suits properly within 60 seconds?	Yes	No	N/A
Do all suits fit properly?	Yes	No	N/A
If no, how many don't fit properly? _____			
Do the raft launching teams launch the raft and then put on their suits?	Yes	No	N/A
Does the launching team know how to launch the raft?	Yes	No	N/A
Does someone take a muster to account for all crew members?	Yes	No	N/A
Does someone deploy the embarkation ladder?	Yes	No	N/A
Does the Coast Guard Drill Conductor discuss how to safely evacuate the boat?	Yes	No	N/A
Does the Coast Guard Drill Conductor discuss the use of a buoyant quoit?	Yes	No	N/A

Drills performed satisfactorily: Yes \_\_\_\_ No \_\_\_\_

Enclosure (2)

# ***Marine Safety Office Anchorage Emergency Drills Evaluation Form***

## **Pre-Man Overboard Drill**

Is vessel equipped to provide rescue swimmer?	Yes	No	N/A
Has rescue swimmer been in the water before with suit on?	Yes	No	N/A
Does vessel have a system in place to recover the person out of the water?	Yes	No	N/A
Is some one on the crew specifically designated to throw ring buoys overboard?	Yes	No	N/A
Does the vessel have smoke flares pre-positioned to mark the victims location?	Yes	No	N/A

## **Man Overboard Drill**

Does the person discovering the emergency alert the crew?	Yes	No	N/A
Does the person call out which side of the vessel the victim fell off?	Yes	No	N/A
Does the master initiate a MOB alarm?	Yes	No	N/A
Do the crew members respond iaw their emergency assignments?	Yes	No	N/A
Does the master use an electronic fix to relocate the victim?	Yes	No	N/A
Do the crew members throw over buoys and other items to mark where to search?	Yes	No	N/A
How long does it take to rig the recover device?	Yes	No	N/A
Does the rescue swimmer immediately get into his suit?	Yes	No	N/A
Is the rescue suit equipped with a harness or simply a rope?	Yes	No	N/A
How long until the victim is "recovered"?	Yes	No	N/A
Does the crew bring blankets?	Yes	No	N/A
Does the crew initiate actions to treat for hypothermia?	Yes	No	N/A

Drills performed satisfactorily: Yes \_\_\_\_ No \_\_\_\_

Enclosure (2)

# *Marine Safety Office Anchorage Emergency Drills Evaluation Form*

## **FIRE DRILL:**

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## **DEWATERING DRILL:**

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## **ABANDON SHIP DRILL:**

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## **MAN OVERBOARD DRILL:**

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## **GENERAL COMMENTS:**

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Vessel Name: \_\_\_\_\_

CFVS examiners signature: \_\_\_\_\_ Date: \_\_\_\_\_

Drills performed satisfactorily: Yes \_\_\_\_ No \_\_\_\_

Enclosure (2)